

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 10, ^{line 1}~~line 16~~, with the following rewritten paragraph:

Referring now to Figure 3, the strobe and response waveforms 40 are illustrated. In particular, the strobe input pulse 42 and current response 44 versus time are represented, and sample acquisition times at four points (reference point 46, on peak point 50, reference point 48 and off peak point 52) are noted. The peak of this current response is considered directly proportional to capacitance of the generating circuit. In one embodiment, four analog-to-digital converters are used to measure the response to the strobe input. Figure 3 shows the sequence (time) locations of the four measurements at reference point 46, on peak point 50, reference point 48 and off peak point 52. The difference in current between the on peak measurement point 50 and reference point 46 is designated as the on sample value 54, while the difference in current between the off peak measurement point 52 and reference point 48 is designated as the off sample value 56. In normal operation, the magnitude of the current at the on peak 50 will be higher for higher degrees of capacitance coupling. Points 46 and 48 are measured just before the leading and trailing edges, respectively, of the strobe input pulse 42, and are used as noise-indicating values, as described below. To render the system more immune to electrical noise, the ~~difference~~ differences between consecutive on sample values 54 and off sample values 56 are accumulated for a large number of strobe input pulses. In a present embodiment, a value is thus computed, called "Accumulate Differences" and the resulting value is in a variable named accDif, which is a measure of the sum of the noise plus the current response to the presence and absence of an object near or touching the sensing surface 18 (Figure 1). As will be appreciated by those skilled in the art, actual measurements and signal processing are based upon digitized values for the measurements at points 46, 48, 50 and 52 over an available dynamic range, such as 0-255.

✓
10/30/06